



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,287	12/23/1999	MAKOTO MIYAGI	0557-4877-2	7229
22850	7590	04/05/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				BRINICH, STEPHEN M
ART UNIT		PAPER NUMBER		
		2625		

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/471,287	MIYAGI, MAKOTO
	<b>Examiner</b> Stephen M. Brinich	<b>Art Unit</b> 2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 07 February 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 3,7,9-12,15,19,21-24 and 27-34 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 3,7,9-12,15,19,21-24,27-29 and 31-33 is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) 30 and 34 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 2/7/06.

4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments, see Response filed 2/7/06 (page 9, lines 3-10), with respect to claims 1-2, 4-6, 8, 13-14, 16-18, 20, & 25-26 have been fully considered and are persuasive. The rejections of claims 1-2, 4-6, 8, 13-14, 16-18, 20, & 25-26 have been obviated by their cancellation.

***Claim Objections***

2. Claims 30 & 34 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

In claims 30 and 34, the recitation that "the set threshold values for each of said respective plural hexagonal cells constructing said single halftone cell are not the same" duplicates the recitations is already required by the recitations in respective parent claims 29 (lines 5-6) and 33 (lines 6-7) "threshold values setting means for setting respective **different** threshold values to the respective grids of said single halftone cell" (emphasis added).

**Allowable Subject Matter**

3. Claims 3, 7, 9-12, 15, 19, 21-24, 27-29, & 31-33 are allowed.
4. Claims 30 & 34 are objected to as failing to further limit the subject matter of a previous claim, but would be allowable if rewritten in proper dependent or independent form.
5. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 3, 7, 15, & 19, the art of record does not teach or suggest the recited threshold value arrangements (set threshold values for each of the hexagonal cells constructing a single halftone cell are not the same) in conjunction with a halftone matrix formed by cutting off facing corners of square halftone threshold matrices to form non-regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

Re claims 9, 21, 27, 29, 31, & 33 (and dependent claims 10-12, 22-24, 28, 30, 32, & 34), the art of record does not teach or suggest the recited division of hexagonal cells that are combined into a halftone matrix formed by cutting off two facing corners of square halftone threshold matrices to form non-regular hexagonal threshold matrices and combining sets of the resulting hexagonal matrices into a halftone cell.

**Conclusion**

6. Any inquiry concerning the contents of this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 571-272-7430.

Any inquiry relating to the status of this application or proceeding or any inquiry of a general nature concerning application processing should be directed to the Tech Center 2600 Customer Service center at 571-272-2600 or to the USPTO Contact Center at 800-786-9199 or 703-308-4357.

The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

The examiner's unit designation has been changed from "Art Unit 2624" to "Technology Division 2625" (as of March 20, 2006).

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 571-272-7437.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 571-273-8300 (as of July 15, 2005).

Art Unit: 2625

Hand-carried correspondence may be delivered to the Customer Service Window, located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

*Stephen Brinich*  
Stephen M Brinich  
Examiner  
Technology Division 2625

smb  
March 30, 2006